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Fig. 1

PRIOR ART

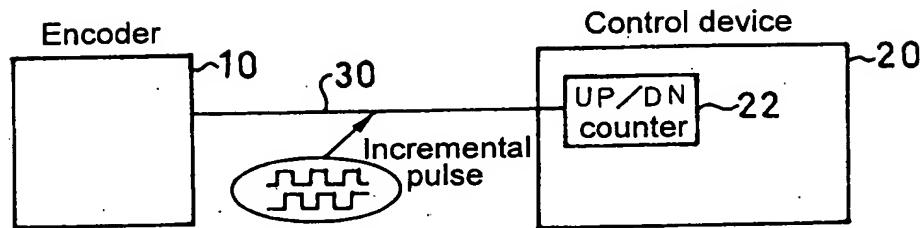


Fig. 2

PRIOR ART

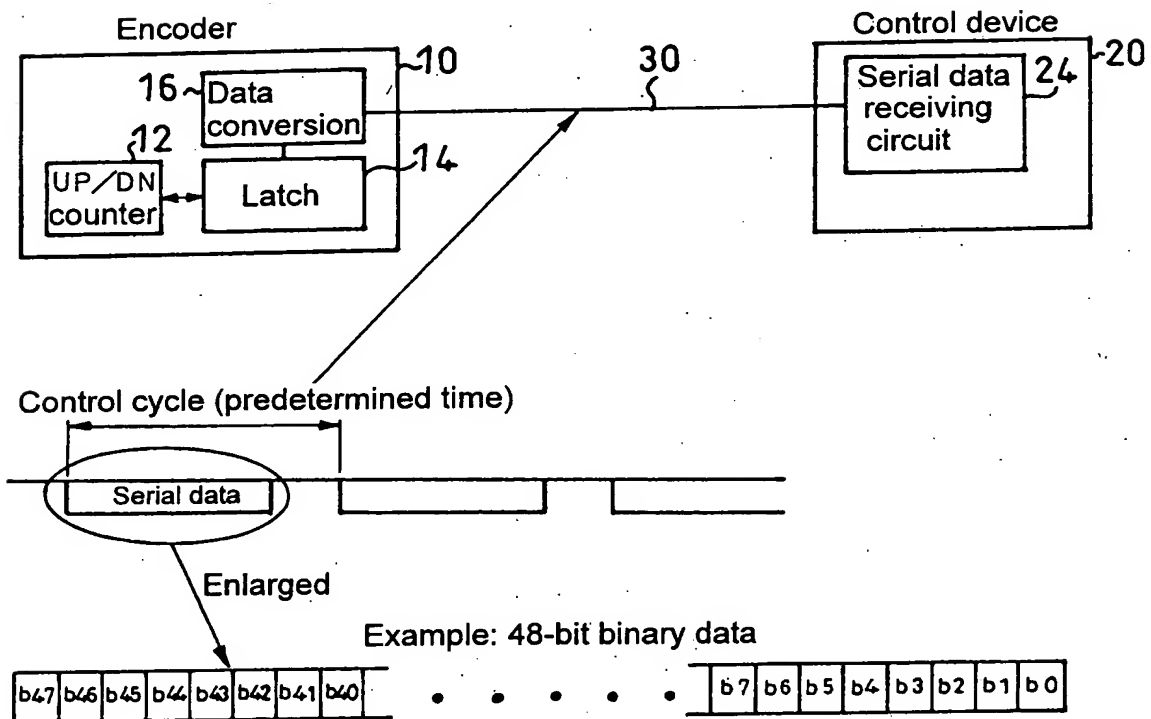
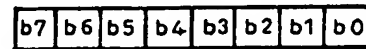


Fig. 3  
 PRIOR ART

Example: Deviation data (8-bit binaries)



Example: Positional data (48-bit binaries)



Fig. 4  
 PRIOR ART

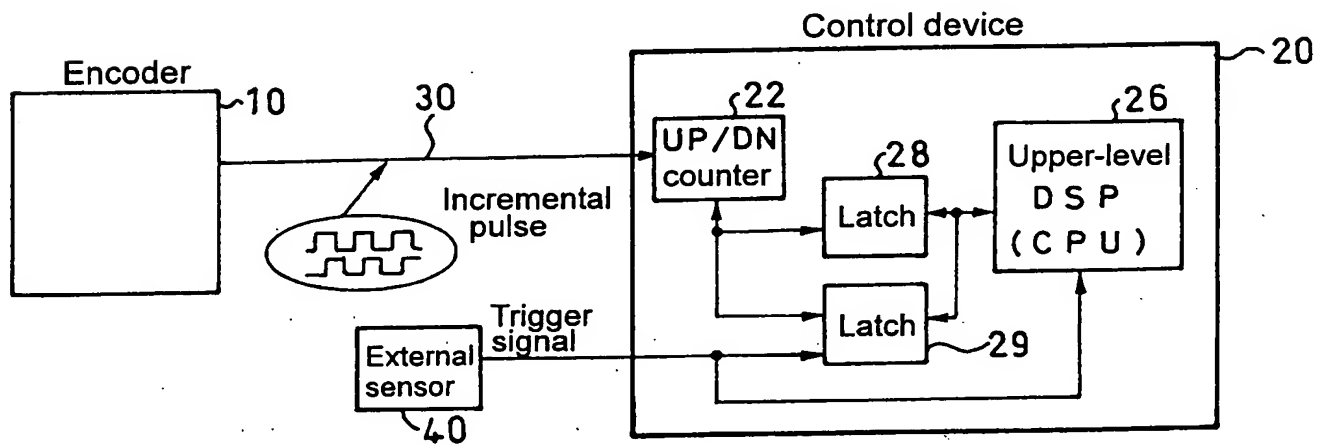


Fig. 5

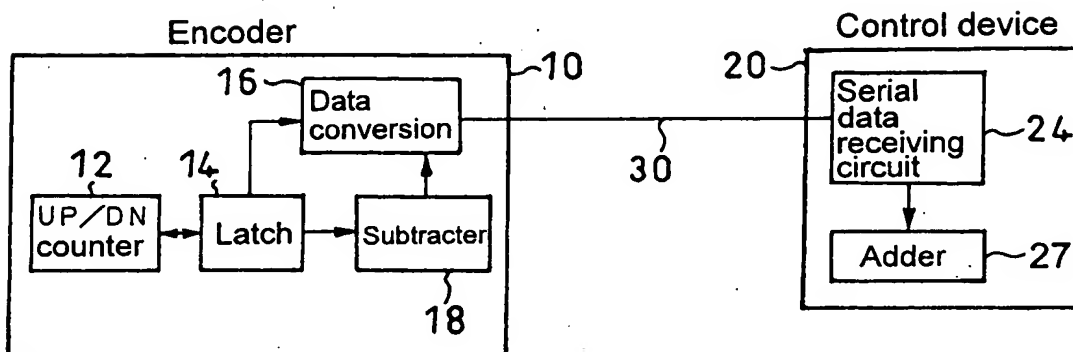


Fig. 6

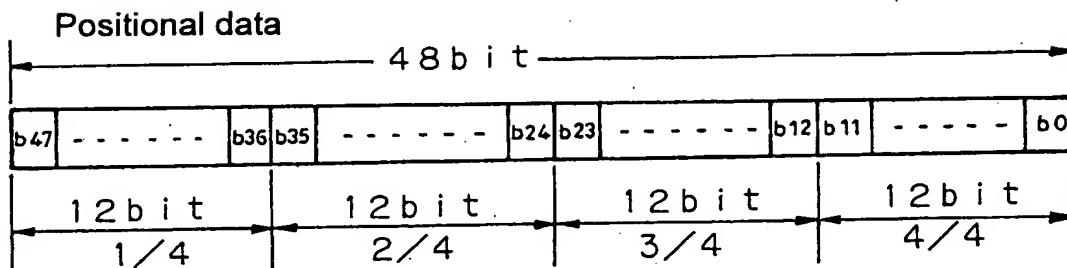
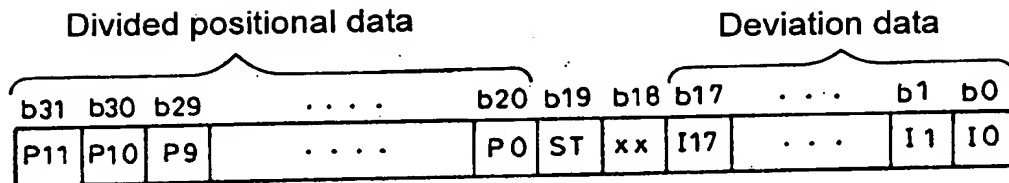


Fig. 7

Positional data: 48 bit  
 Deviation data: 18 bit



$P_n$  :  $(n+12*m)$ th bit of position

$I_n$  :  $n$ th bit of deviation

xx : Preliminary

ST : First flag of division of position  
 (1 ... first, 0 ... subsequent)

Fig. 8

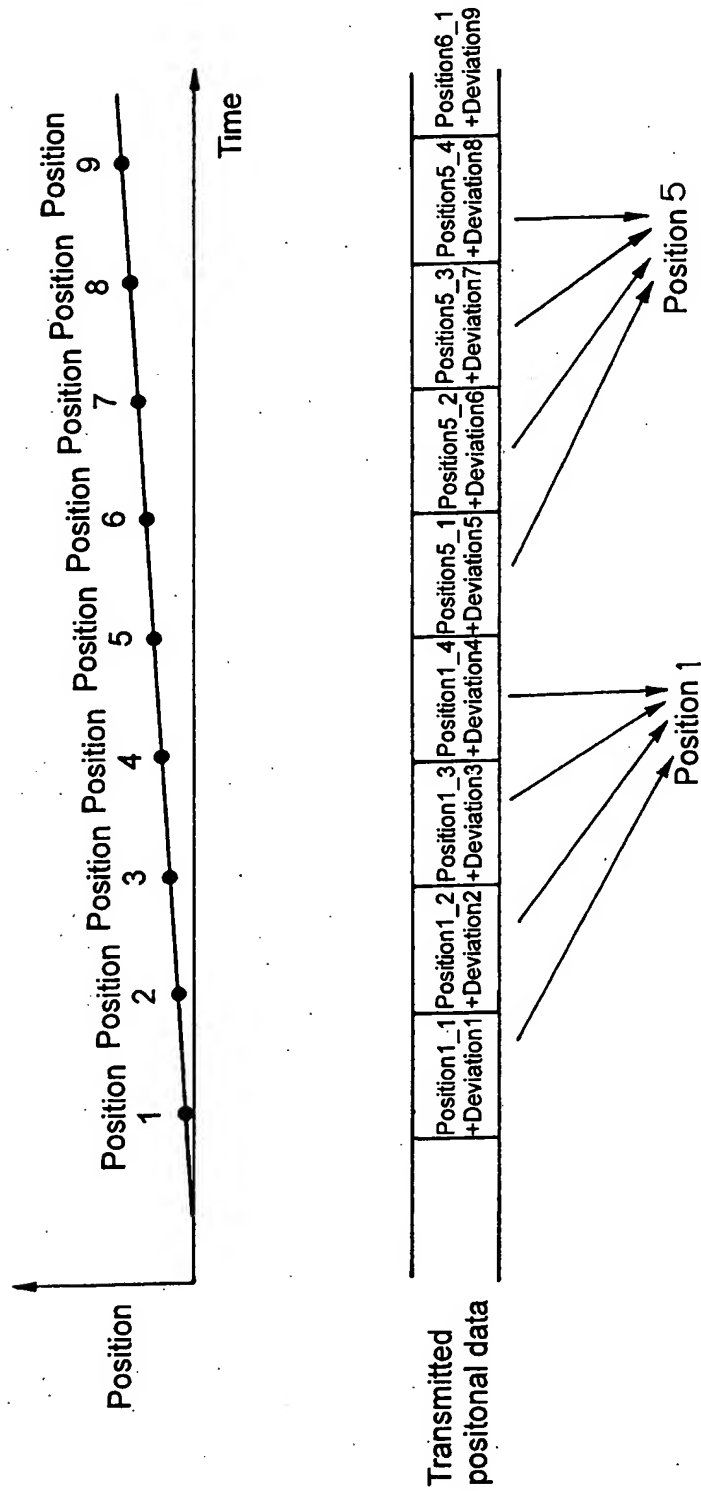
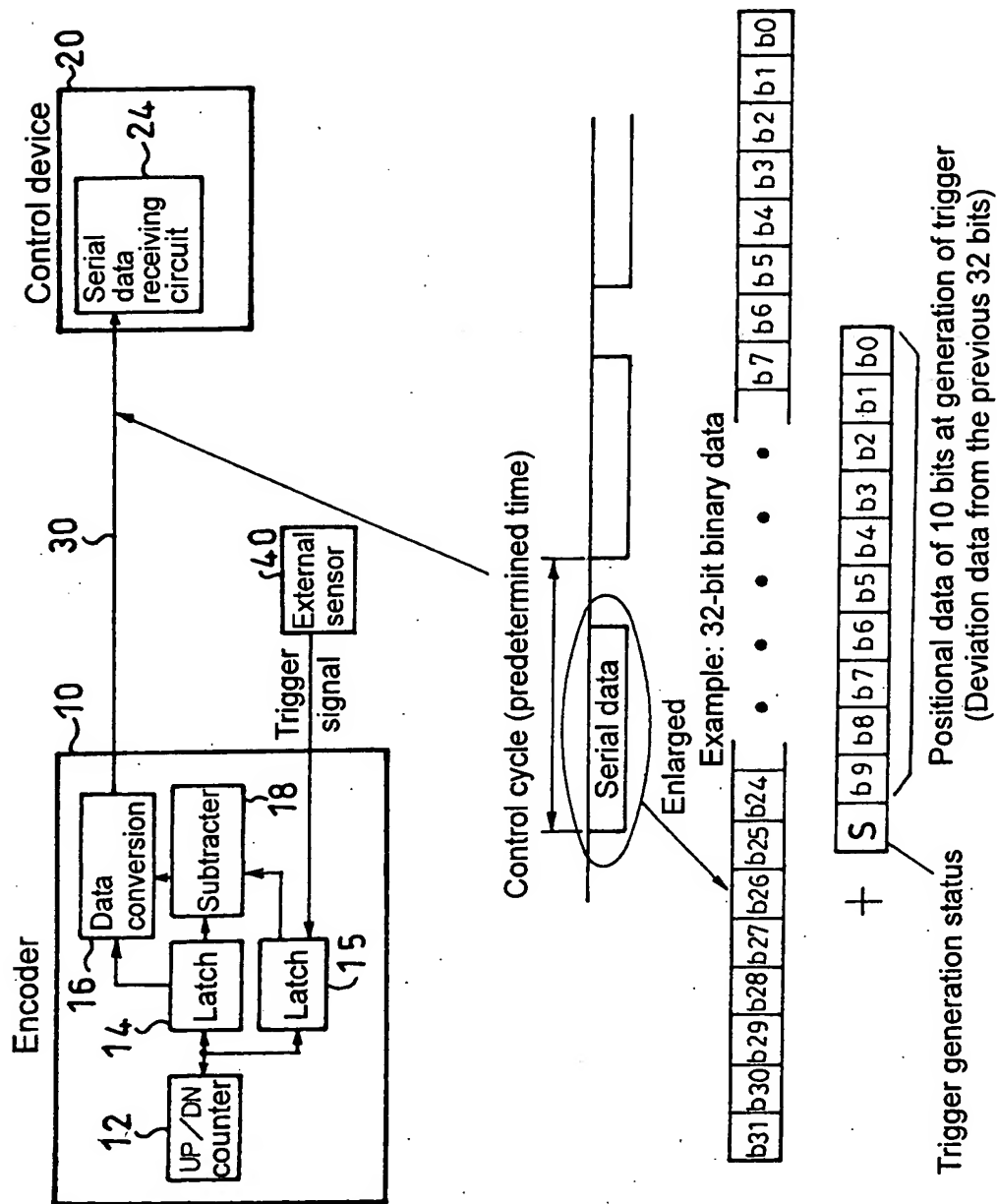


Fig. 9



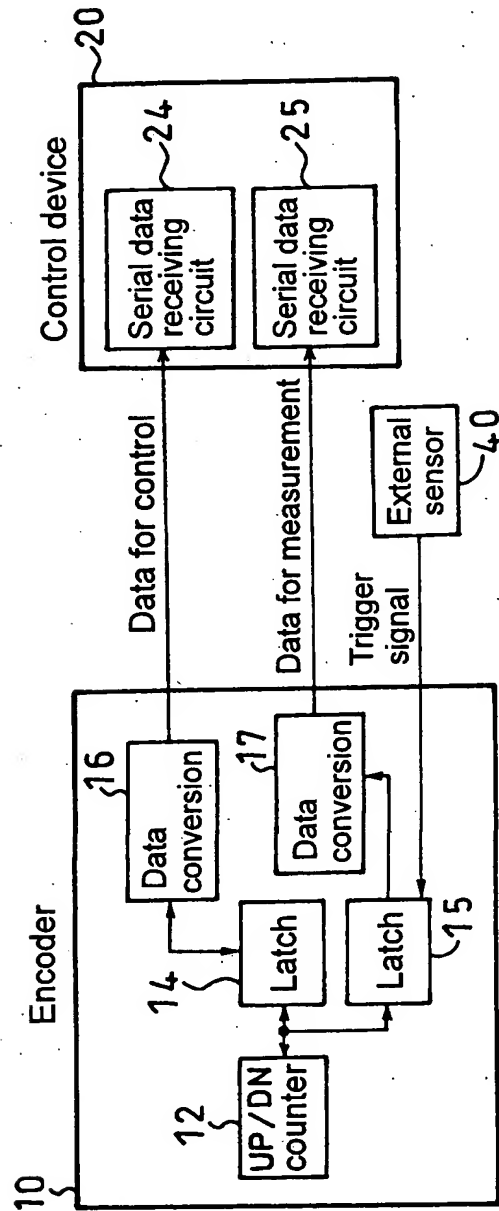
The diagram illustrates the timing of the TRG input. The top part shows a position vs. time graph with positions 1 through 9. Two trigger events are marked: TRG1 at Position 3 and TRG2 at Position 7. Below this, the 'External trigger' signal is shown as a pulse that occurs between Position 3 and Position 4. The 'Trigger generation status' signal, labeled with a subscript S, is shown as a pulse that occurs between Position 4 and Position 5. A note states: 'Control device recognizes trigger input by encoder status'.

Position	Position 1	Position 2	Position 3	Position 4	Position 5	Position 6	Position 7	Position 8	Position 9
Transmitted positional data	Position 1 + Deviation	Position 2 + Deviation	Position 3 + Deviation	Position 4 + Deviation	Position 5 + Deviation	Position 6 + Deviation	Position 7 + Deviation	Position 8 + Deviation	Position 9 + Deviation
Deviation data	0	0	0	0	0	0	0	0	0
Deviation data being effective			↑				↑		

Deviation data at TRG ON=0 is invalid



Fig. 11



## External trigger

Trigger generation status  
+ data at generation of trigger

	Position	Position	Position	Position	Position	Position	Position	Position	Position
Transmitted positional data for control	1	2	3	4	5	6	7	8	9